



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,163	01/22/2001	Hideshi Mochizuki	1115,65144	2571

24978 7590 11/03/2004
GREER, BURNS & CRAIN
300 S WACKER DR
25TH FLOOR
CHICAGO, IL 60606

EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT PAPER NUMBER

2655

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/767,163

Applicant(s)

MOCHIZUKI ET AL.

Examiner

Jorge L Ortiz-Criado

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,2,6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim U.S. Patent No. 6,016,296.

Regarding claim 1, Kim discloses an information storage apparatus, operated by an electric power, for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium, said information storage apparatus (See col. 1, lines 6-7; col. 1, line 67 to col. 2, line 19; col. 2, lines 40-51; Fig. 2), line comprising:

a recognition section for recognizing whether or not said electric power is a power of a predetermined level or more (See col. 2, lines 52-55; Fig. 2, ref# 260); and

a decelerator for decelerating rotation of said information recording medium in a first deceleration mode which consumes a relatively large power (See col. 2, lines 56-61; col. 3, lines 1-9; col. 3, lines 25-34; Fig. 2, ref# 270,250; Fig. 4, ref# 400)

decelerating the rotation of said information recording medium in a second deceleration mode which consumes a relatively small power depending upon whether said recognition section recognizes that said electric power is the power of the predetermined level or more (See col. 3, lines 1-9, lines 35-61; Fig. 4), or

that said electric power is less than the predetermined level (See col. 3, lines 1-9, lines 35-61; Fig. 4).

Regarding claim 2, Kim discloses a driver for driving said information recording medium in said predetermined direction, wherein said decelerator employs, as said second deceleration mode, a deceleration mode for stopping the driving by said driver to decelerate the rotation of said information recording medium (See col. 2, lines 40-61; col. 3, lines 1-9; Fig. 2, ref# 220,250,270)

Regarding claim 6, Kim discloses comprising a driver for receiving a signal indicating a rotation speed (See col. 2, lines 40-61; col. 3, lines 1-9; Fig. 2, ref# 220,250,270), and

driving the information recording medium in said predetermined direction in such a manner that said information recording medium rotates at the rotation speed indicated by the signal (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4);

wherein said decelerator employs, as said second deceleration mode, a deceleration mode for inputting a signal indicating a rotation speed lower than the rotation speed of said information recording medium to said driver to decelerate the

rotation of the information recording medium (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4).

Regarding claim 7, Kim discloses a driver for receiving a signal indicating a rotation speed (See col. 2, lines 40-61; col. 3, lines 1-9; Fig. 2, ref# 220,250,270), and driving the information recording medium in said predetermined direction in such a manner that said information recording medium rotates at the rotation speed indicated by the signal (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4),

wherein said decelerator employs a deceleration mode for inputting a signal indicating a rotation speed lower than the rotation speed of said information recording medium to said driver to decelerate the rotation of the information recording medium and subsequently inputting a signal indicating a rotation speed further lower than the rotation speed indicated by the signal to said driver to further decelerate the rotation of said information recording medium as said second deceleration mode (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4).

2. Claims 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kühn U.S. Patent No. 5,715,157.

Regarding claim 9, Kühn discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an

information reproduction with respect to the information recording medium (See col. 1, lines 56-62; Fig. 1,4), said information storage apparatus comprising:

a brake for applying a brake force to said information recording medium to decelerate rotation (See col. 1, lines 56-62; col. 2, lines 11-20); and

an intermittent braking decelerator for intermittently operating said brake to decelerate the rotation of said information recording medium when a rotation speed of said medium exceeds a predetermined value (See col. 2, lines 11-20; col. 3, lines 24-31)

wherein said intermittent braking decelerator intermittently operates said brake to decelerate the rotation of said information recording medium, and subsequently continuously operates the brake to further decelerate the rotation of the information recording medium. (See col. 2, lines 11-30; col. 3, lines 24-31; “the intermittently braking operates to decelerate and subsequently continuously operates the brake until reach the desired final rotational speed”)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-5,8,11 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim U.S. Patent No. 6,016,296 in view of Kühn U.S. Patent No. 5,715,157.

Regarding claim 3, Kim discloses all the limitations based on claim 1, as outlined above.

Kim discloses a driver for driving said information recording medium in said predetermined direction (See col. 2, lines 56-61; col. 3, lines 1-9; col. 3, lines 25-34; Fig. 2, ref# 270,250; Fig. 4, ref# 400); and

decelerate the rotation, wherein said decelerator employs a deceleration mode for stopping the driving by said driver to decelerate the rotation of said information recording medium and subsequently decelerate the rotation of the information recording medium as said second deceleration mode (See col. 3, lines 1-9, lines 35-61; Fig. 4).

Kim does not expressly disclose a brake for applying a brake force to said information recording medium to decelerate the rotation.

However this feature is well known in the art as evidenced by Kühn, which discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium comprising a brake for applying a brake force to said information recording medium to decelerate rotation (See col. 1, lines 56-62; col. 2, lines 11-20; col. 3, lines 24-31).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to decelerate the rotation of the information recording medium, including a brake for applying a brake force in order to quickly and reliably operate the driver.

Regarding claim 4, Kim discloses all the limitations based on claim 1, as outlined above.

Kim discloses decelerate the rotation, wherein said decelerator employs a deceleration mode for stopping the driving by said driver to decelerate the rotation of said information recording medium and subsequently decelerate the rotation of the information recording medium as said second deceleration mode (See col. 3, lines 1-9, lines 35-61; Fig. 4).

Kim does not expressly disclose a brake for applying a brake force to said information recording medium to decelerate the rotation, wherein said decelerator employs, as said second deceleration mode, a deceleration mode for intermittently operating said brake to decelerate the rotation of said information recording medium.

However this feature is well known in the art as evidenced by Kühn, which discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium comprising a brake for applying a brake force to said information recording medium to decelerate the rotation, a deceleration mode for intermittently operating said brake to decelerate the rotation of said information recording medium (See col. 1, lines 56-62; col. 2, lines 11-20; col. 3, lines 24-31).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to decelerate the rotation of the information recording medium, including for applying a brake force to said information recording medium to decelerate the rotation, a deceleration mode for intermittently operating said brake to decelerate the

rotation of said information recording medium in order to quickly and reliably operate the driver.

Regarding claim 5, Kim discloses all the limitations based on claim 1, as outlined above.

Kim discloses decelerate the rotation, wherein said decelerator employs a deceleration mode for decelerate the rotation of said information recording medium and subsequently continuously decelerate the rotation of the information recording medium as said second deceleration mode (See col. 3, lines 1-9, lines 35-61; Fig. 4).

Kim does not expressly disclose a brake for applying a brake force to said information recording medium to intermittently operating said brake.

However this feature is well known in the art as evidenced by Kühn, which discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium comprising a brake for applying a brake force to said information recording medium to decelerate the rotation, a deceleration mode for intermittently operating said brake to decelerate the rotation of said information recording medium (See col. 1, lines 56-62; col. 2, lines 11-20; col. 3, lines 24-31).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to decelerate the rotation of the information recording medium, including for applying a brake force to said information recording medium to decelerate the rotation, a deceleration mode for intermittently operating said brake to decelerate the

rotation of said information recording medium in order to quickly and reliably operate the driver.

Regarding claim 8, Kim discloses all the limitations based on claim 1, as outlined above.

Kim discloses a driver for receiving a signal indicating a rotation speed (See col. 2, lines 40-61; col. 3, lines 1-9; Fig. 2, ref# 220,250,270), and

driving the information recording medium in said predetermined direction in such a manner that said information recording medium rotates at the rotation speed indicated by the signal (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4); and

decelerate the rotation, wherein said decelerator employs a deceleration mode for inputting a signal indicating a rotation speed lower than the rotation speed of said information recording medium to said driver to decelerate the rotation of the information recording medium and subsequently decelerate the rotation of the information recording medium as said second deceleration mode (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4).

Kim does not expressly disclose a brake for applying a brake force to said information recording medium.

However this feature is well known in the art as evidenced by Kühn, which discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to

the information recording medium comprising a brake for applying a brake force to said information recording medium to decelerate rotation (See col. 1, lines 56-62; col. 2, lines 11-20; col. 3, lines 24-31).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to decelerate the rotation of the information recording medium, including a brake for applying a brake force in order to quickly and reliably operate the driver.

Regarding claim 11, Kim discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium (See col. 1, lines 6-7; col. 1, line 67 to col. 2, line 19; col. 2, lines 40-51; Fig. 2), said information storage apparatus comprising:

a driver for receiving a signal indicating a rotation speed (See col. 2, lines 40-61; col. 3, lines 1-9; Fig. 2, ref# 220,250,270), and

driving the information recording medium in said predetermined direction in such a manner that said information recording medium rotates at the rotation speed indicated by the signal (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4); and

a signal controlling decelerator for inputting a signal indicating a rotation speed lower than the rotation speed of said information recording (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4); and

wherein said signal controlling decelerator inputs the signal indicating the rotation speed lower than the rotation speed of said information recording medium to said driver to decelerate the rotation of the information recording medium (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4),

Kim does not expressly disclose a brake for applying a brake force to said information recording medium, and subsequently operates said brake to further decelerate and stop the rotation of the information recording medium.

However this feature is well known in the art as evidenced by Kühn, which discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium comprising a brake for applying a brake force to said information recording medium to decelerate rotation and subsequently operates said brake to further decelerate and stop the rotation of the information recording medium. (See col. 1, lines 56-62; col. 2, lines 11-20; col. 3, lines 24-31).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to decelerate the rotation of the information recording medium, including a brake for applying a brake force in order to quickly and reliably operate the driver.

Regarding claim 12, Kim further discloses wherein said signal controlling decelerator inputs the signal indicating the rotation speed lower than the rotation speed of

said information recording medium to said driver to decelerate the rotation of the information recording medium (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4), and subsequently inputs a signal indicating a rotation speed further lower than the rotation speed indicated by the signal to said driver to further decelerate the rotation of said information recording medium (See col. 2, lines 40-61; col. 3, lines 1-54; Fig. 4).

4. The prior art made of record and not relied upon is **considered pertinent** to applicant's disclosure.

a) J.P Publication No. 06-119708 to Okawa, Regarding claim 1, Kim discloses an information storage apparatus, operated by an electric power, for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium, said information storage apparatus line comprising and a decelerator for decelerating rotation of said information recording medium in a first deceleration mode which consumes a relatively large power decelerating the rotation of said information recording medium in a second deceleration mode which consumes a relatively small power and a brake for applying a brake force to said information recording medium to decelerate rotation and an intermittent braking decelerator for intermittently operating said brake to decelerate the rotation of said information recording medium

b) J.P Publication No. 05-198082 to Miyashita, which discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a

predetermined direction to perform at least an information reproduction with respect to the information recording medium, said information storage apparatus comprising: a brake for applying a brake force to said information recording medium to decelerate rotation; and an intermittent braking decelerator for intermittently operating said brake to decelerate the rotation of said information recording medium when a rotation speed of said medium exceeds a predetermined value and wherein said intermittent braking decelerator intermittently operates said brake to decelerate the rotation of said information recording medium, and subsequently continuously operates the brake to further decelerate the rotation of the information recording medium

c) U.S. Patent No. 5,894,204 to Kumita, which discloses a spindle motor control having a brake signal a brake for applying a brake force to said information recording medium to decelerate rotation.

Response to Arguments

5. Applicant's arguments filed 6/22/04 have been fully considered but they are not persuasive.

In regard to claim 1, as unpatentable over Kim, Applicants argue that Kim does not disclose or suggest a first and second deceleration mode requiring a relatively large amount of power and relatively small amount of power, respectively and in which the determination of the mode for deceleration is made based on the power level

The Examiner cannot concur because Kim decelerates the information-recording medium to a first or second mode, which consumes relative large power and small power, respectively. In the first mode the rotation of the recording medium is higher than the second rotation in the second deceleration mode. At higher rotation (first mode) the storage apparatus consumes more electric power needed to obtain the predetermined higher rotation, and decelerates at a lower rotation (second mode) the storage apparatus consumes less electric power needed to obtain the predetermined lower rotation. Kim discloses in which the determination of the mode for deceleration is made based on the power level, the level of voltage in the battery or a power supply used.

In regard to claim 9, as unpatentable over Kühn. Applicants argue that Kühn does not disclose or suggest wherein **said intermittent braking decelerator** intermittently operates said brake to decelerate the rotation of said information recording medium, and **subsequently continuously operates** the brake to further decelerate the rotation of the information recording medium.

The Examiner cannot concur because Kühn discloses wherein **said intermittently braking operates to decelerate** and subsequently continuously operates the brake until **reach the desired final rotational speed**. The intermittently braking subsequently continuously operates the brake to further decelerate the rotation until reach the desired rotation speed (See col. 2, lines 11-30; col. 3, lines 24-31)

Applicants also argue that Kühn does not realize the savings in power consumption that occurs when **intermittent braking is followed by continuous braking**.

The Examiner cannot concur because as claimed in claim 9, an intermittent braking is operated and **said intermittent braking** is subsequently continuously operated to decelerate the rotation. How, Where or When the savings in power consumption are made, as claimed in claim 9?

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **intermittent braking followed by continuous braking**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In regard to claim 11, as unpatentable over Kim in view Kühn.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case,

Kim discloses a **driver** for receiving a signal indicating a rotation speed, and **driving** the information recording medium in said predetermined direction in such a manner that said information recording medium rotates at the rotation speed indicated by the signal; and

a signal controlling decelerator for inputting a signal indicating a rotation speed lower than the rotation speed of said information recording.

Kim **does not expressly disclose a brake** for applying a brake force to said information recording medium, and subsequently operates said brake to further decelerate and stop the rotation of the information recording medium this feature is well known in the art as evidenced by Kühn, which discloses an information storage apparatus for holding an information recording medium in a predetermined position and rotating the information recording medium in a predetermined direction to perform at least an information reproduction with respect to the information recording medium comprising a **brake for applying a brake force** to said information recording medium **to decelerate rotation and subsequently operates said brake** to further decelerate and stop the rotation of the information recording medium, and it would have been obvious to one with ordinary skill in the art at the time of the invention to decelerate the rotation of the information recording medium, **including a brake for applying a brake force** in order to **quickly and reliably operate the driver** as suggested by Kühn.

In response to applicant's argument that "a technique which uses less power than the conventional eject operation, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the

basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

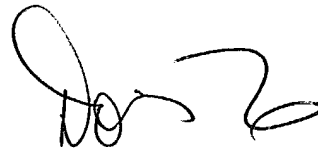
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm),Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

joc



DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600